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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,608	01/14/2002	Leonard Bell	59	5748

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EXAMINER	
VANDERVEGT, FRANCOIS P	

ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/047,608	BELL, LEONARD	
	Examiner	Art Unit	
	F. Pierre VanderVegt	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) *14-26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This application claims the benefit of the filing date of provisional application 60/262,540.

Claims 1-26 are currently pending.

Election/Restrictions

1. Claims **14-26 stand withdrawn** from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the Paper filed October 16, 2003.

2. Accordingly, claims **1-13 are the subject of examination** in the present Office Action.

In view of Applicant's remarks filed March 31, 2004, only the following ground of rejection is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-13 stand rejected under 35 U.S.C. 102(b) as being anticipated by Fitch et al. (cited on form PTO-1449; Circulation (1999) 100:2499-2506).

It was previously stated: "Fitch teaches the administration of a humanized single chain monoclonal antibody directed to human complement component C5 (h5G1.1-scFv) to subjects undergoing coronary bypass surgery (CBP). Fitch teaches that a post-operative measurement of CK-MB yields information on myocardial injury and that antibody-treated patients have lower CK-MB levels than placebo-treated controls (Figure 4 in particular). Fitch teaches that "[e]levated postoperative CK-MB levels are associated with an increasing incidence of postoperative ventricular regional wall abnormalities and decreased global left ventricular fraction in the early post-CABG period, which can persist up to 9 months" (page 2504, paragraph bridging columns in particular). While Fitch states that, "there does not appear to be a threshold effect," Fitch asserts that, "it is apparent that the greater the release of CK-MB, the greater the subsequent morbidity, cost, and mortality" and that, "it is likely that significant reductions in postoperative myocardial injury might be associated with improved outcomes" (page 2504, paragraph bridging columns in particular). It is noted that Fitch is silent about patient samples comprising at least 50 ng/ml of CK-MB postoperatively, however Fitch measures CK-MB in units of IU/ml rather than in the ng/ml format used in the instant specification (Figure 4 for example). The office does not have the facilities and resources to provide the factual evidence needed in order to establish the relationship between IU and ng per ml or that there is a difference between the materials, i.e., that the claims are

directed to new materials and that such a difference would have been considered unexpected by one of ordinary skill in the art, that is, the claimed subject matter, if new, is unobvious. In the absence of evidence to the contrary, the burden is on the Applicant to prove that the claimed materials are different from those taught by the prior art and to establish patentable differences. See In re Best 562F.2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray 10 USPQ 2d 1922 (PTO Bd. Pat. App. & Int. 1989). The patient groups of Fitch were randomly assigned to receive placebo or h5G1.1-scFv and therefore each group was as likely as the next to comprise patients above the "threshold" of at least about 50 ng/ml [claim 1], 60 ng/ml [3] 70 ng/ml [4], 80 ng/ml [5], 90 ng/ml [6], 100 ng/ml [7] or 120 ng/ml [8]. The results of Fitch show that all patients benefited from treatment with h5G1.1-scFv, as the level of myocardial damage, as evidenced by the level of CK-MB in the serum of antibody-treated patients was significantly lower than in the serum of placebo-treated patients (Figure 4 in particular) as supported by the assertion that, "it is likely that significant reductions in postoperative myocardial injury might be associated with improved outcomes" (page 2504, paragraph bridging columns in particular). While Fitch did not select patients preoperatively based upon a postoperative CK-MB level of at least about 50 ng/ml [claim 1], 60 ng/ml [3] 70 ng/ml [4], 80 ng/ml [5], 90 ng/ml [6], 100 ng/ml [7] or 120 ng/ml [8], it is noted that the instant specification does not provide a means for predicting postoperative CK-MB levels preoperatively. Accordingly, in the absence of evidence to the contrary, the instant invention includes the treatment of patients below a postoperative threshold level as well as those above the threshold and is therefore no different in practice than the method of Fitch. The prior art teaching anticipates the claimed invention."

Applicant's arguments filed March 31, 2004 have been fully considered but they are not persuasive.

Applicant took pains on page 2 "[b]efore specifically addressing the rejections" to explain on that the term "prophylaxis" means the prevention of myocardial infarction and, bridging pages 2 and 3, that the claimed method of "prophylactic treatment significantly decreases the likelihood of a CPB patient experiencing a large myocardial infarction." As a first matter regarding this statement, the claims are not drawn to "significantly decreasing the likelihood of," rather they are strictly drawn to "preventing" a myocardial infarction. Second, the claims do not recite "large myocardial infarction," rather they are drawn to ANY myocardial infarction. Accordingly, the breadth of Applicant's statement to stress surprising results is not commensurate with the claimed invention.

Applicant argues that Fitch does not anticipate the claimed invention because Fitch does not teach or suggest any methods for prophylaxis against myocardial infarction in patients undergoing a procedure that involves CPB on page 4 of the response. Applicant admits, however, that Fitch teaches that "C5 inhibition significantly attenuates postoperative myocardial injury" and the potent inhibitory and anti-inflamatory effects of h5G1.1-scFv were associated with significant reductions in postoperative myocardial injury." It is respectfully submitted that myocardial infarctions fall within the scope of myocardial injury and that preventing myocardial infarction related to CPB falls within the scope of significant reductions in postoperative myocardial injury.

Applicant further argues that Fitch "fails to report post-operative, peak CK-MB levels in patients undergoing a procedure that involves CPB" asserting that Fitch merely reports total CK-MB levels. However, as a first matter, Applicant's statements again are not commensurate with the claims. The claims are drawn to MI "which exhibit CK-MB levels greater than about 50 nano-grams/ml in a subject" (claim 1 for example). There is no recitation in the claims of "peak CK-MB" whatsoever. Further, as stated previously, Fitch measured CK-MB in IU, while the instant specification and claims recite ng/ml. These are not equivalent units of measurement and, despite Applicant's contention, the relationship IS relevant. If measured in ng/ml, the CK-MB levels disclosed by Fitch could very well exceed the 50 ng/ml threshold.

Lastly, Applicant effectively admits in the paragraph bridging pages 2-3 of the response that there is no real difference between the instant method and the method of Fitch. On page two, last paragraph, Applicant contends that:

> "The present methods do not require determining or predicting post-operative blood levels of CK-MB prior to administering the compound. Rather, in accordance with the present disclosure, the prophylaxis treatment is given to patients undergoing a procedure that involves CPB. Applicants have surprisingly found that such prophylactic treatment significantly decreases the likelihood of a CPB patient experiencing a large myocardial infarction."

Accordingly, Applicant treats a group of CPB patients with an anti-CPB antibody that is the same antibody as Fitch used to treat CPB patients and, like Fitch, examined the patients post-operatively for an effect of the h5G1.1-scFv antibody on the patient. However, Fitch examined the patient for levels of CK-MB in the serum in IU/ml and correlated those findings with the overall level of myocardial injury in the patients. Applicant, on the other hand examined patients postoperatively for a peak (not claimed) level of CK-MB in the serum in ng/ml and correlated those findings with the incidence of myocardial infarction in the treatment group versus untreated controls at each of a number of serum levels. Therefore, Applicant's findings merely amount to a further characterization of the results of the method of Fitch. While Fitch does not disclose the end result of performing the claimed method *in haec verba*, the decrease in the incidence of myocardial infarction correlated to ng/ml CK-MB, the fact that the exact same method is used indicates that Applicant is claiming a further characterization of an otherwise old method and the decrease in myocardial infarction is an inherent property of the method taught by Fitch. See *Ex parte* Novitski (BdPatApp&Int) 26 USPQ2d 1389.

Conclusion

4. No claim is allowed.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Pierre VanderVegt whose telephone number is (571) 272-0852. The examiner can normally be reached on M-Th 6:30-4:00; Alternate Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

F. Pierre VanderVegt, Ph.D. /FPV/
Patent Examiner
June 11, 2004

PATRICK J. NOLAN, PH.D.
PRIMARY EXAMINER
6/13/04